

## CLAIMS

We claim:

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1. A universal auction system having a programmable auction server, the programmable  
2 auction server comprising:  
3 a plurality of auction modules wherein at least one auction module corresponds to at least  
4 one function of an auction selected from the group consisting of a bid verifier, an  
5 information manager, a clearer, a registration manager, and a proxy bidder.
  2. The programmable auction server as in claim 1, further comprising:  
3 auction modules wherein at least one auction specification module performs at least one  
4 transaction selected from the group comprising a bid verification transaction, an information  
5 management transaction, a clearing transaction, and a registration transaction.
  3. The programmable auction server as in claim 1, further comprising:  
4 a set of trading primitives;  
5 a script interpreter for interpreting a temporal protocol script representing an auction  
6 specification, the script including references to at least a portion of the set of  
7 trading primitives; and  
8 means for switching an auction specification of one phase with an auction specification of  
9 another phase.
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4. The programmable auction server as in claim 3, wherein at least one auction module of one phase is replaced with at least one auction module of another phase.

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5. The programmable auction server as in claim 1, at least one phase comprising an interval in which at least one transaction occurs, the transaction is selected from the group comprising submitting a bid, admitting a bid, withdrawing a bid, and replacing a bid.

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6. The programmable auction server as in claim 5, wherein the phase is terminated by a condition.

7. The programmable auction server as in claim 6, wherein the condition is a time period.

8. A universal auction system comprising:

a trading primitive;

a script generator for translating trading primitives to temporal protocol script;

a script interpreter for interpreting script protocol; and

a market specification console adapted to support a plurality of market protocols.

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9. The universal auction system as in claim 8, the market specification console further comprising a plurality of rules wherein at least one rule is user-modifiable.

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10. The universal auction system as in claim 9, wherein rules comprise market protocols.

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1 11. The universal auction system as in claim 8, wherein the market specification console is  
2 coupled to a programmable auction server wherein said programmable auction server is adapted  
3 to receive market protocols from said market specification console, the market specification  
4 console having a graphic user interface (GUI).

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1 12. The universal auction system of claim 11, wherein a trader interface is coupled to a  
2 network.

1 13. The universal auction system of claim 12, wherein the trader interface is used by a trader  
2 to submit a bid.

1 14. A market specification console comprising:  
2 means for specifying a plurality of market protocols;  
3 means for displaying at least one market protocol; and  
4 means for transmitting at least one market protocol to a programmable auction server.

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1 15. A method of designing a universal auction system comprising:  
2 generating a plurality of auction modules wherein at least one auction module corresponds  
3 to at least one function of an auction selected from the group comprising of a bid verifier, an  
4 information manager, a clearer, and a registration manager;  
5 specifying a plurality of rules wherein a transaction comprises at least one rule; and

6 implementing at least one transaction comprising a bid verification, information  
7 dissemination, clearing, and registration of information.

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16. The method of claim 15 further comprising:  
2 displaying a rule to a market designer.

1 17. The method of claim 15 further comprising:  
2 modifying at least one rule.

1 18. The method of claim 15 further comprising:  
2 interpreting a scripted rule.

1 19. The method of claim 15 further comprising:  
2 generating a scripted rule.

1 20. The method of claim 15 further comprising:  
2 transmitting a rule to a programmable auction server.

1 21. The method of claim 15 further comprising:  
2 maintaining a status of bids.

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